

10/723,428

## WEST Search History

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DATE: Monday, December 05, 2005

Hide?	Set Name	Query	Hit Count
		DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=ADJ	
<input type="checkbox"/>	L87	L85 and ((birdcage or "bird cage" or bird-cage or ((unitary or single) with (structure))) with ((primary or secondary or first or second) with (resonan\$2)) with (shar\$3 or connect\$4 or mutual\$2 or common or "same" or partial\$2 or portion) with (overlap\$4 or over-lap\$4))	1
<input type="checkbox"/>	L86	L85 and ((birdcage or "bird cage" or bird-cage or ((unitary or single) with (resonat\$3 or coil or structure))) with ((primary or secondary or first or second) with (resonat\$3)) with (shar\$3 or connect\$4 or mutual\$2 or common or "same" or partial\$2 or portion) with (overlap\$4 or over-lap\$4))	0
<input type="checkbox"/>	L85	L84 and (((primary or secondary or first or second) with (resonan\$2)) with (ring or loop or anulus or anular\$2 or "end" or "member") with (rod or leg or conduct\$2 or segment))	66
<input type="checkbox"/>	L84	L81 and ((primary or secondary or first or second) with (resonan\$2))	1209
<input type="checkbox"/>	L83	L82 and (slop\$3 or taper\$3 or ((vary\$3 or vari\$4 or chang\$3 or alter\$3 or different or separate or individual) with (diameter or radius)))	3
<input type="checkbox"/>	L82	L81 and (((primary or secondary or first or second) with (resonan\$2)) with (neighbor\$4 or "adjacent" or "next" or "region" or area or volume) with (shar\$3 or connect\$4 or mutual\$2 or common or "same" or partial\$2 or portion) with (overlap\$4 or over-lap\$4))	15
<input type="checkbox"/>	L81	L77 and (birdcage or "bird cage" or bird-cage or ((unitary or single) with (resonat\$3 or coil or structure)))	2987
<input type="checkbox"/>	L80	L79 and (slop\$3 or taper\$3 or ((vary\$3 or vari\$4 or chang\$3 or alter\$3 or different or separate or individual) with (diameter or radius)))	1
<input type="checkbox"/>	L79	L78 and (((primary or secondary or first or second) with (resonan\$2)) with (neighbor\$4 or "adjacent" or "next" or "region" or area or volume) with (shar\$3 or connect\$4 or mutual\$2 or common or "same" or partial\$2 or portion) with (overlap\$4 or over-lap\$4))	9
<input type="checkbox"/>	L78	L77 and (birdcage or "bird cage" or bird-cage or ((unitary or single) with (structure)))	1225
<input type="checkbox"/>	L77	((324/300-322.ccls.) or (600/407-435.ccls.) or (382/128-131.ccls.))	18004
<input type="checkbox"/>	L76	L64 and (slop\$3 or taper\$3 or ((vary\$3 or vari\$4 or chang\$3 or alter\$3 or different or separate or individual) with (diameter or radius)))	2
<input type="checkbox"/>	L75	L74 and ((birdcage or "bird cage" or bird-cage or ((unitary or single) with (structure))) with ((primary or secondary or first or second) with (resonan\$2)) with (shar\$3 or connect\$4 or mutual\$2 or common or "same" or partial\$2 or portion) with (overlap\$4 or over-lap\$4))	2
<input type="checkbox"/>	L74	L64 and (diameter)	5
		L72 and ((connect\$4 or interconnect\$4 or inter-connect\$4 or link\$3 or bridg\$3	

Interference Search

<input type="checkbox"/>	L73	or join\$3) with (ring or loop or anulus or anular\$2 or "end" or "member") with (rod or leg or conduct\$2 or segment))	2
<input type="checkbox"/>	L72	L64 and (((primary or secondary or first or second) with (resonan\$2)) with (ring or loop or anulus or anular\$2 or "end" or "member") with (rod or leg or conduct\$2 or segment))	3
<input type="checkbox"/>	L71	L67 and (((primary or secondary or first or second) with (resonan\$2)) with (ring or loop or anulus or anular\$2 or "end" or "member") with (rod or leg or conduct\$2 or segment))	2
<input type="checkbox"/>	L70	L67 and (electric\$4)	3
<input type="checkbox"/>	L69	L68 and (((primary or secondary or first or second) with (resonan\$2)) with (separat\$4 or parallel or individual\$2 or independent\$2) with (channel or port or receiver))	1
<input type="checkbox"/>	L68	L67 and ((separat\$4 or parallel or individual\$2 or independent\$2) with (channel or port or receiver))	3
<input type="checkbox"/>	L67	L66 and ((shar\$3 or connect\$4 or mutual\$2 or common or "same" or partial\$2 or portion) with (overlap\$4 or over-lap\$4))	4
<input type="checkbox"/>	L66	L65 and (field-of-view or "field of view" or "FOV" or "ROI" or (region with (interest or investigation)))	4
<input type="checkbox"/>	L65	L64 and ((connect\$4 or interconnect\$4 or inter-connect\$4 or link\$3 or bridg\$3 or join\$3) with (ring or loop or anulus or anular\$2 or "end" or "member") with (rod or leg or conduct\$2 or segment))	4
<input type="checkbox"/>	L64	L63 and (((primary or secondary or first or second) with (resonan\$2)) with (neighbor\$4 or "adjacent" or "next" or "region" or area or volume) with (shar\$3 or connect\$4 or mutual\$2 or common or "same" or partial\$2 or portion) with (overlap\$4 or over-lap\$4))	10
<input type="checkbox"/>	L63	L1 and (birdcage or "bird cage" or bird-cage or ((unitary or single) with (structure)))	12198
<input type="checkbox"/>	L62	L61 and ((connect\$4 or interconnect\$4 or inter-connect\$4 or link\$3 or bridg\$3 or join\$3) with (ring or loop or anulus or anular\$2 or "end" or "member") with (rod or leg or conduct\$2 or segment))	2
<input type="checkbox"/>	L61	L55 and (((primary or secondary or first or second) with (resonan\$2)) with (neighbor\$4 or "adjacent" or "next" or "region" or area or volume) with (shar\$3 or connect\$4 or mutual\$2 or common or "same" or partial\$2 or portion) with (overlap\$4 or over-lap\$4))	3
<input type="checkbox"/>	L60	L59 and (((primary or secondary or first or second) with (resonan\$2)) with (neighbor\$4 or "adjacent" or "next" or "region" or area or volume) with (shar\$3 or connect\$4 or mutual\$2 or common or "same" or partial\$2 or portion) with (overlap\$4 or over-lap\$4))	2
<input type="checkbox"/>	L59	L58 and (birdcage or "bird cage" or bird-cage or ((unitary or single) with (structure)))	5
<input type="checkbox"/>	L58	L57 and ((connect\$4 or interconnect\$4 or inter-connect\$4 or link\$3 or bridg\$3 or join\$3) with (ring or loop or anulus or anular\$2 or "end" or "member") with (rod or leg or conduct\$2 or segment))	9
<input type="checkbox"/>	L57	L56 and (field-of-view or "field of view" or "FOV" or "ROI" or (region with (interest or investigation)))	10
<input type="checkbox"/>	L56	L55 and ((neighbor\$4 or "adjacent" or "next" or "region" or area or volume) with (overlap\$4 or over-lap\$4))	14

<input type="checkbox"/>	L55	L54 and ((shar\$3 or connect\$4 or mutual\$2 or common or "same" or partial\$2 or portion) with (overlap\$4 or over-lap\$4))	17
<input type="checkbox"/>	L54	L53 and (((primary or secondary or first or second) with (resonan\$2)) with (ring or loop or anulus or anular\$2 or "end" or "member") with (rod or leg or conduct\$2 or segment))	175
<input type="checkbox"/>	L53	L52 and (rod or leg or conduct\$2 or segment)	538
<input type="checkbox"/>	L52	L51 and (((primary or secondary or first or second) with (resonan\$2)) with (ring or loop or anulus or anular\$2 or "end" or "member"))	794
<input type="checkbox"/>	L51	L49 and (ring or loop or anulus or anular\$2 or "end" or "member")	5629
<input type="checkbox"/>	L50	L49 and (ring or loop or anulus or anular\$2)	3292
<input type="checkbox"/>	L49	L1 and ((primary or secondary or first or second) with (resonan\$2))	7938
<input type="checkbox"/>	L48	L47 and (unitary)	0
<input type="checkbox"/>	L47	L46 and (electric\$4)	4
<input type="checkbox"/>	L46	L45 and (field-of-view or "field of view" or "FOV" or "ROI" or (region with (interest or investigation)))	5
<input type="checkbox"/>	L45	L44 and ((shar\$3 or connect\$4 or mutual\$2 or common or "same" or partial\$2 or portion) with (overlap\$4 or over-lap\$4))	11
<input type="checkbox"/>	L44	L24 and ((birdcage or "bird cage" or bird-cage) with ((primary or secondary or first or second) with (resonan\$2)))	12
<input type="checkbox"/>	L43	L42 and ((birdcage or "bird cage" or bird-cage) with ((primary or secondary or first or second) with (resonan\$2)))	3
<input type="checkbox"/>	L42	L41 and (ring or loop or anulus or anular\$2)	10
<input type="checkbox"/>	L41	L40 and (rod or leg or conduct\$2 or segment)	10
<input type="checkbox"/>	L40	L39 and ((primary or secondary or first or second) with (resonan\$2))	11
<input type="checkbox"/>	L39	L38 and (electric\$4)	15
<input type="checkbox"/>	L38	L37 and ((shar\$3 or connect\$4 or mutual\$2 or common or "same" or partial\$2 or portion) with (overlap\$4 or over-lap\$4))	17
<input type="checkbox"/>	L37	L36 and (shar\$3 or connect\$4 or mutual\$2 or common or "same")	18
<input type="checkbox"/>	L36	L35 and (head or neck or skull or brain or cranium)	18
<input type="checkbox"/>	L35	L34 and ((neurovascular\$2 or neuro-vascular\$2 or neck or anterior or posterior or spine or cervical or back) with (coil or array))	21
<input type="checkbox"/>	L34	L25 and (field-of-view or "field of view" or "FOV" or "ROI" or (region with (interest or investigation)))	51
<input type="checkbox"/>	L33	L27 and (monski.in.)	1
<input type="checkbox"/>	L32	L25 and (monski.in.)	2
<input type="checkbox"/>	L31	L24 and (monski.in.)	5
<input type="checkbox"/>	L30	L29 and ((neurovascular\$2 or neuro-vascular\$2 or neck or anterior or posterior or spine or cervical or back) with (coil or array))	14
<input type="checkbox"/>	L29	L28 and (head or neck or skull or brain or cranium)	23
<input type="checkbox"/>	L28	L27 and (field-of-view or "field of view" or "FOV" or "ROI" or (region with (interest or investigation)))	32
<input type="checkbox"/>	L27	L26 and ((shar\$3 or connect\$4 or mutual\$2 or common or "same") with	62

		(overlap\$4 or over-lap\$4))	
<input type="checkbox"/>	L26	L25 and (shar\$3 or connect\$4 or mutual\$2 or common or "same")	97
<input type="checkbox"/>	L25	L24 and ((neighbor\$4 or "adjacent" or "next" or "region" or area or volume) with (overlap\$4 or over-lap\$4))	99
<input type="checkbox"/>	L24	L2 and (overlap\$4 or over-lap\$4)	202
<input type="checkbox"/>	L23	L7 and (slop\$3 or taper\$3 or ((vary\$3 or vari\$4 or chang\$3 or alter\$3 or different or separate or individual) with (diameter or radius)))	4
<input type="checkbox"/>	L22	L20 and (slop\$3 or taper\$3 or ((vary\$3 or vari\$4 or chang\$3 or alter\$3 or different or separate or individual) with (diameter or radius)))	1
<input type="checkbox"/>	L21	L20 and (slop\$3 or taper\$3 or ((vary\$3 or vari\$4 or chang\$3 or alter\$3) with (diameter or radius)))	1
<input type="checkbox"/>	L20	L19 and (field-of-view or "field of view" or "FOV" or "ROI" or (region with (interest or investigation)))	11
<input type="checkbox"/>	L19	L18 and (parallel or separat\$3 or independent\$2)	11
<input type="checkbox"/>	L18	L14 and (channel)	11
<input type="checkbox"/>	L17	L16 and (channel)	8
<input type="checkbox"/>	L16	L14 and (parallel)	10
<input type="checkbox"/>	L15	L14 and ((parallel with (imag\$3 or resonan\$3)) or "PI")	7
<input type="checkbox"/>	L14	L13 and ((neighbor\$4 or "adjacent" or "next") with (overlap\$4 or over-lap\$4))	14
<input type="checkbox"/>	L13	L12 and (neighbor\$4 or "adjacent" or "next")	57
<input type="checkbox"/>	L12	L11 and (ring or loop or anulus or anular\$2 or rod or conduct\$2 or leg or segment\$3)	73
<input type="checkbox"/>	L11	L10 and (diameter or taper\$4)	76
<input type="checkbox"/>	L10	L9 and (resonan\$2)	113
<input type="checkbox"/>	L9	L8 and (head or neck or skull or brain or cranium)	114
<input type="checkbox"/>	L8	L2 and (overlap\$4 or over-lap\$4)	202
<input type="checkbox"/>	L7	L6 and (ellipsoid\$4 or ellipse or elliptical\$3 or elliptical\$3)	5
<input type="checkbox"/>	L6	L5 and (diameter or taper\$4)	11
<input type="checkbox"/>	L5	L4 and (overlap\$4 or over-lap\$4)	13
<input type="checkbox"/>	L4	L3 and (head or neck or skull or brain or cranium)	37
<input type="checkbox"/>	L3	L2 and (dome or domed or (spherical with resonator) or end-cap\$4)	39
<input type="checkbox"/>	L2	L1 and (birdcage or "bird cage" or bird-cage)	761
<input type="checkbox"/>	L1	((magnetic adj resonance) or MRI or NMR)	216310

END OF SEARCH HISTORY

## Hit List

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Search Results - Record(s) 1 through 1 of 1 returned.

☐ 1. Document ID: US 20050099179 A1

**Using default format because multiple data bases are involved.**

L80: Entry 1 of 1

File: PGPB

May 12, 2005

PGPUB-DOCUMENT-NUMBER: 20050099179

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20050099179 A1

TITLE: Parallel imaging compatible birdcage resonator

PUBLICATION-DATE: May 12, 2005

## INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY
Monski, William J. JR.	Sewickley	PA	US
Alradady, Fahad	Glenshaw	PA	US
Misic, George J.	Allison Park	PA	US

US-CL-CURRENT: 324/318

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	WIC	Draw. C.
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Term	Documents
DIFFERENT	4706364
DIFFERENTS	287
SEPARATE	2775532
SEPARATES	327663
INDIVIDUAL	1897335
INDIVIDUALS	160411
DIAMETER	2534814
DIA	355170
DIAMETERS	403211
DIAM	51175

RADIUS	559559
(L79 AND (SLOP\$3 OR TAPER\$3 OR ((VARY\$3 OR VARI\$4 OR CHANG\$3 OR ALTER\$3 OR DIFFERENT OR SEPARATE OR INDIVIDUAL) WITH (DIAMETER OR RADIUS))) ) .PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD.	1

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10/723428

## Hit List

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☐ 1. Document ID: US 20050099179 A1.

Using default format because multiple data bases are involved.

L82: Entry 1 of 15

File: PGPB

May 12, 2005

PGPUB-DOCUMENT-NUMBER: 20050099179

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20050099179 A1

TITLE: Parallel imaging compatible birdcage resonator

PUBLICATION-DATE: May 12, 2005

## INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY
Monski, William J. JR.	Sewickley	PA	US
Alradady, Fahad	Glenshaw	PA	US
Misic, George J.	Allison Park	PA	US

US-CL-CURRENT: 324/318Applicats Own  
Instant  
Application

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	RMK	Draw D
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☐ 2. Document ID: US 6832108 B2

L82: Entry 2 of 15

File: USPT

Dec 14, 2004

US-PAT-NO: 6832108

DOCUMENT-IDENTIFIER: US 6832108 B2

TITLE: Endovaginal MRI receiver coil

DATE-ISSUED: December 14, 2004

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
deSouza; Nandita M.	London			GB
Gilderdale; David J.	Bovey Tracey			GB

US-CL-CURRENT: 600/423; 600/422

N/A TAF

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	RMK	Draw D
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☐ 3. Document ID: US 6777937 B1

L82: Entry 3 of 15

File: USPT

Aug 17, 2004

US-PAT-NO: 6777937

DOCUMENT-IDENTIFIER: US 6777937 B1

TITLE: Nuclear quadrupole resonance method and apparatus

*NA TAF 12/5/2005*

DATE-ISSUED: August 17, 2004

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Miller; Joel	Cheverly	MD		
Garroway; Allen	Fort Washington	MD		

US-CL-CURRENT: 324/318; 324/322

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	DOC	Drawings
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☐ 4. Document ID: US 6745064 B2

L82: Entry 4 of 15

File: USPT

Jun 1, 2004

US-PAT-NO: 6745064

DOCUMENT-IDENTIFIER: US 6745064 B2

*NA TAF 12/05/2005*

TITLE: Magnetic resonance method for forming a fast dynamic imaging

DATE-ISSUED: June 1, 2004

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Fuderer; Miha	Eindhoven			NL
Harvey; Paul Royston	Eindhoven			NL

US-CL-CURRENT: 600/410; 324/307, 324/309

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	DOC	Drawings
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☐ 5. Document ID: US 6714013 B2

L82: Entry 5 of 15

File: USPT

Mar 30, 2004

US-PAT-NO: 6714013

DOCUMENT-IDENTIFIER: US 6714013 B2

*Class on 892**NA TAF 12-5-2005***\*\* See image for Certificate of Correction \*\***

TITLE: Magnetic resonance imaging receiver/transmitter coils



DATE-ISSUED: March 30, 2004

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Misic; George J.	Allison Park	PA		

US-CL-CURRENT: 324/318; 324/322

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KMC	Draw D
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☐ 6. Document ID: US 6426624 B1

L82: Entry 6 of 15

File: USPT

Jul 30, 2002

US-PAT-NO: 6426624

DOCUMENT-IDENTIFIER: US 6426624 B1

*NA TAF 12/5/2005*

TITLE: Assembly formed by a magnetic resonance apparatus and a combination of coils

DATE-ISSUED: July 30, 2002

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Snelten; Jeroen	Eindhoven			NL

US-CL-CURRENT: 324/318; 324/309, 324/322

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KMC	Draw D
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☐ 7. Document ID: US 6317091 B1

L82: Entry 7 of 15

File: USPT

Nov 13, 2001

US-PAT-NO: 6317091

DOCUMENT-IDENTIFIER: US 6317091 B1

*NA TAF 12/5/2005*

TITLE: Apparatus for inductively coupling a nuclear magnetic resonance signal into a reception antenna, and medical instrument incorporating such an apparatus

DATE-ISSUED: November 13, 2001

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Oppelt; Arnulf	Spardorf			DE

US-CL-CURRENT: 343/742; 324/318, 343/867

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KMC	Draw D
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☐ 8. Document ID: US 6177797 B1

L82: Entry 8 of 15

File: USPT

Jan 23, 2001

US-PAT-NO: 6177797

DOCUMENT-IDENTIFIER: US 6177797 B1

*On Applicant's IDS*

TITLE: Radio-frequency coil and method for resonance/imaging analysis

DATE-ISSUED: January 23, 2001

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Srinivasan; Ravi	Richmond Heights	OH		

US-CL-CURRENT: 324/318; 324/322

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWIC	Draw Dg
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☐ 9. Document ID: US 5664568 A

L82: Entry 9 of 15

File: USPT

Sep 9, 1997

US-PAT-NO: 5664568

DOCUMENT-IDENTIFIER: US 5664568 A

*On CH 892 TAF 12-5-2005*

TITLE: Split-top, neck and head vascular array for magnetic resonance imaging

DATE-ISSUED: September 9, 1997

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Srinivasan; Ravi	Richmond Hts.	OH		
Henderson; Robert G.	Wickliffe	OH		
Elek; Robert A.	Chardon	OH		

US-CL-CURRENT: 600/422; 324/318, 324/322

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KWIC	Draw Dg
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☐ 10. Document ID: US 5578925 A

L82: Entry 10 of 15

File: USPT

Nov 26, 1996

US-PAT-NO: 5578925

DOCUMENT-IDENTIFIER: US 5578925 A

*MA TAF 12-5-2005*

TITLE: Vertical field quadrature phased array coil system

DATE-ISSUED: November 26, 1996

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Molyneaux; David A.	Mentor	OH		
Braum; William O.	Solon	OH		

US-CL-CURRENT: 324/318; 324/322

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KMC	Draw D
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☐ 11. Document ID: US 5394087 A

L82: Entry 11 of 15

File: USPT

Feb 28, 1995

US-PAT-NO: 5394087

DOCUMENT-IDENTIFIER: US 5394087 A

TITLE: Multiple quadrature surface coil system for simultaneous imaging in magnetic resonance systems

DATE-ISSUED: February 28, 1995

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Molyneaux; David A.	Willowick	OH		

US-CL-CURRENT: 324/318; 600/422

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KMC	Draw D
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☐ 12. Document ID: US 5374890 A

L82: Entry 12 of 15

File: USPT

Dec 20, 1994

US-PAT-NO: 5374890

DOCUMENT-IDENTIFIER: US 5374890 A

TITLE: Simultaneous magnetic resonance imaging of multiple human organs

DATE-ISSUED: December 20, 1994

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Zou; Xueming	Chesterland	OH		
Patrick; John L.	Chagrin Falls	OH		
McNally; James M.	Chagrin Falls	OH		

US-CL-CURRENT: 324/318; 324/309

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KMC	Draw D
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☐ 13. Document ID: US 5374889 A

L82: Entry 13 of 15

File: USPT

Dec 20, 1994

US-PAT-NO: 5374889

DOCUMENT-IDENTIFIER: US 5374889 A

TITLE: Magnetic resonance measurement

NA TAF 12-5-2005

DATE-ISSUED: December 20, 1994

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Leach; Martin O.	Wallington			GB
Sharp; Jonathan C.	Leicester			GB

US-CL-CURRENT: 324/309; 324/307

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	FIGS	Draw. D.
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☐ 14. Document ID: US 5258717 A

L82: Entry 14 of 15

File: USPT

Nov 2, 1993

US-PAT-NO: 5258717

DOCUMENT-IDENTIFIER: US 5258717 A

On Applicants IDS  
of 8-17-2005

NA TAF 12-5-2005

TITLE: Geometrically isolated multiple port volume MRI receiving coil comprising multiple quadrature coils

DATE-ISSUED: November 2, 1993

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Misic; George J.	Novelty	OH		
Reid; Eric D.	Turtle Creek	PA		

US-CL-CURRENT: 324/318

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	FIGS	Draw. D.
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☐ 15. Document ID: US 4825162 A

L82: Entry 15 of 15

File: USPT

Apr 25, 1989

US-PAT-NO: 4825162

DOCUMENT-IDENTIFIER: US 4825162 A

On Applicants IDS of 8-17-2005

NA TAF 12-5-2005

\*\* See image for Certificate of Correction \*\*

TITLE: Nuclear magnetic resonance (NMR) imaging with multiple surface coils

DATE-ISSUED: April 25, 1989

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Roemer; Bernard	Schenectady	NY		
Edelstein; William A.	Schenectady	NY		

US-CL-CURRENT: 324/318; 324/312

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	Notes	Drawings
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Term	Documents
PRIMARY	1830285
PRIM	50681
SECONDARY	1070678
SEC	737437
FIRST	7122810
FIRSTS	952
SECOND	6387623
SECONDS	604617
ADJACENT	3459129
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NEXT	2196684
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☐ 1. Document ID: US 20050099179 A1

Using default format because multiple data bases are involved.

L83: Entry 1 of 3

File: PGPB

May 12, 2005

PGPUB-DOCUMENT-NUMBER: 20050099179

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20050099179 A1

TITLE: Parallel imaging compatible birdcage resonator

PUBLICATION-DATE: May 12, 2005

## INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY
Monski, William J. JR.	Sewickley	PA	US
Alradady, Fahad	Glenshaw	PA	US
Misic, George J.	Allison Park	PA	US

US-CL-CURRENT: 324/318

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMC	Draw D
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☐ 2. Document ID: US 6745064 B2

L83: Entry 2 of 3

File: USPT

Jun 1, 2004

US-PAT-NO: 6745064

DOCUMENT-IDENTIFIER: US 6745064 B2

TITLE: Magnetic resonance method for forming a fast dynamic imaging

DATE-ISSUED: June 1, 2004

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Fuderer; Miha	Eindhoven			NL
Harvey; Paul Royston	Eindhoven			NL

US-CL-CURRENT: 600/410; 324/307, 324/309

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	KMC	Draw D
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☐ 3. Document ID: US 4825162 A

L83: Entry 3 of 3

File: USPT

Apr 25, 1989

US-PAT-NO: 4825162

DOCUMENT-IDENTIFIER: US 4825162 A

\*\* See image for Certificate of Correction \*\*

TITLE: Nuclear magnetic resonance (NMR) imaging with multiple surface coils

DATE-ISSUED: April 25, 1989

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Roemer; Bernard	Schenectady	NY		
Edelstein; William A.	Schenectady	NY		

US-CL-CURRENT: 324/318; 324/312

Full	Title	Citation	Front	Reclaim	Classification	Date	Reference	Claims	NUM	Draw	U
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Term	Documents
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DIFFERENTS	287
SEPARATE	2775532
SEPARATES	327663
INDIVIDUAL	1897335
INDIVIDUALS	160411
DIAMETER	2534814
DIA	355170
DIAMETERS	403211
DIAM	51175
RADIUS	559559
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L83: Entry 2 of 3

File: USPT

Jun 1, 2004

DOCUMENT-IDENTIFIER: US 6745064 B2

TITLE: Magnetic resonance method for forming a fast dynamic imaging

Brief Summary Text (2):

In magnetic resonance imaging there is a general tendency to obtain acceptable images in shorter time. For this reason there have been developed recently the sensitivity encoding method called "SENSE" by the Institute of Biomedical Engineering and Medical Informations, University and ETH Zurich, Switzerland. The SENSE method is based on an algorithm which directly acts on the image as detected by the coils of the magnetic resonance apparatus, wherein subsequent encoding steps can be skipped and thus an acceleration of the signal acquisition for imaging of a factor two to three can be obtained. Crucial for the SENSE method is the knowledge of the sensitivity of the coils, which are arranged in so called sensitivity maps. In order to accelerate this method there are proposals to use raw sensitivity maps which can be obtained through division by either the "sum-of-squares" of the single coil references or by an optional body coil reference (see e.g. K. Pruessmann et. al. in Proc. ISMRM, 1998, abstracts p. 579, 799, 803 and 2087.)

Detailed Description Text (28):

A further option for above mentioned reconstruction methods is filtering of the L-data before FFT, by multiplying it with a tapering function, e.g. a Riesz function. In addition the L-data can be used for the reconstruction of the coil-sensitivity maps. In regular SENSE the coil-sensitivity maps are usually derived by comparison of coil element data to a body-coil acquisition. However, according to above mentioned methods the body-coil data is not or not necessarily available. It is already proposed to take the root-sum-of-squares (RSSQ) combination of the coil element data instead. Yet, that RSSQ is devoid of phase information, thus differences with pixels of the L-image may be introduced. Therefore it is suggested to take a plain sum of the L-data over the coil elements, which will give a more proper result. If the plain sum can be taken after a very basic phase correction, e.g. correcting L-data of every coil element to have zero average phase.

Current US Original Classification (1):600/410Current US Cross Reference Classification (1):324/307Current US Cross Reference Classification (2):324/309

## CLAIMS:

2. A magnetic resonance method for fast dynamic imaging of a plurality of signals acquired by an array of multiple sensors comprising the steps of: providing a sensitivity map of each of the sensors prior to imaging, weighting at least two adjacent sensors recording signals originating from the same imaging position with a sensitivity factor of each respective sensor at each respective imaging position, and calculating an image intensity from the signals measured by the different sensors, wherein a number of phase encoding steps required for carrying out said



method is reduced with respect to a full set by segmenting k-space into regions of different acquisition, said segmenting including that a first region of a first acquisition type data of normal magnetic resonance imaging is acquired for a first partial image using one of a full set of phase encoding steps and data of fast dynamic imaging, and that a number of phase encoding steps is reduced in accordance with a low reduction factor with respect to the full set, said segmenting further including that a second region of a second acquisition type data of fast dynamic imaging is acquired for a second partial image using a number of phase encoding steps which is reduced with a full reduction factor, wherein the first and the second partial images are used to form the full image of the object to be imaged, wherein the first region and the second region overlap to a predetermined extent, and wherein the resulting image is combined as

$I=f(D)*L+(1-f(D))*S$  whereas: I=the resulting image D=determinant of the equations for every pixel  $f(D)$ =function that approaches 1 for low values of D and approaches 0 for high values of D L=data of the first region S data of the second region.

3. The magnetic resonance method according to claim 2, wherein the data of the first region are filtered by multiplying with a tapering function before fast Fourier transformation.

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☐ 1. Document ID: US 20050099179 A1

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L87: Entry 1 of 1

File: PGPB

May 12, 2005

PGPUB-DOCUMENT-NUMBER: 20050099179

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20050099179 A1

TITLE: Parallel imaging compatible birdcage resonator

PUBLICATION-DATE: May 12, 2005

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY
Monski, William J. JR.	Sewickley	PA	US
Alradady, Fahad	Glenshaw	PA	US
Misic, George J.	Allison Park	PA	US

US-CL-CURRENT: 324/318

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	FIGS	Draw. Cl.
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Term	Documents
BIRDCAGE	879
BIRDCAGES	56
"BIRD CAGE"	0
BIRD-CAGE	210
BIRD-CAGES	13
UNITARY	289710
UNITARIES	6
UNITARYS	3
SINGLE	3663718
SINGLES	3525

STRUCTURE	4638403
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